REGION OF HAMILTON-WENTWORTH

- RECOMMENDATION -

DATE: 1991 May 16
(768.4)

REPORT TO: Chairman and Members
Economic Development and Planning Committee

FROM: Mr. J. D. Thoms
Commissioner of Planning and Development

SUBJECT: Contaminated Sites (PLA-91-030)

RECOMMENDATION:

a) That the development of a Regional program regarding contaminated sites be identified as a high priority project in the preparation of the Regional Environmental Office implementation plan.

b) That the Minister of Environment be requested to develop a more direct and comprehensive province-wide program to identify and clean-up contaminated sites.

c) That the discussion paper "Contaminated Sites in Hamilton-Wentworth" be circulated as information to the area municipalities and Ministry of Environment.

J. D. Thoms, M.C.I.P.
Commissioner
Planning & Development Department

FOR V. J. Abraham, M.C.I.P.
Director
Regional Planning Branch

FINANCIAL/STAFFING/LEGAL IMPLICATIONS:

Staffing requirements for the Regional Environment Office will be outlined in the implementation plan.

BACKGROUND:

The Planning Department has undertaken an investigation of the issues arising from the contamination of properties as part of the 1990 work program (Environmental Inventory). (See attached discussion paper, Contaminated Sites in Hamilton-Wentworth.)

Information sharing meetings were held between the Engineering, Health, and Planning Departments. Emergency response agencies such as Fire Departments and the Police were included in the consultation. Discussions have taken place with the Ministry of Environment and Area Municipalities.

The findings of the consultation and research are as follows:

Contamination of a site by toxic or hazardous materials can be caused in a number of ways, not just heavy industrial use. Properties contaminated by hazardous materials pose a potential health threat to the community, particularly when redevelopment is proposed or the contaminants are moving off-site.

The Province is ultimately responsible for the resolution of problems related to contaminated sites. Nevertheless, municipalities have responsibilities for matters affected by the contamination of soil.

Provincial Action Required

The way in which the Ministry of Environment now applies the Site Decommissioning Guidelines to the shutting-down of industrial and utility facilities is insufficient to ensure that all potentially contaminated property is not redeveloped before all contaminated materials are identified and, when necessary, removed safely. It is not certain under present procedures that all redevelopment comes to the attention of the Ministry of Environment (MOE).

Other municipalities in Ontario are examining ways to use their authority to prevent redevelopment of contaminated sites. It may soon be more common procedure in Ontario for regional and local municipalities to demand consultant or MOE reports from developers that certify that industrial land being converted to other uses is devoid of contaminated materials. The City of Ottawa has proposed a municipal environmental assessment program to create such a procedure. The City of Toronto has an environmental protection office which reviews development proposals. However, there does not appear to be any consensus on the most appropriate type of action, or a common single approach, being taken by municipalities across the Province.

A straightforward but strict administrative system requiring MOE certification of cleanliness prior to the issuance of building permits would clarify the respective roles and responsibilities of the province and municipalities. Such a Province-wide permit system, similar to other North American jurisdictions, would ensure that property owners faced a more uniform development approval process across Ontario municipalities. The Region should request the province to develop such a consistent administrative process.

Contaminants can be moved off-site by wind, run-off, and by mixing, floating or sinking in the groundwater. Therefore, even when no redevelopment or change of use is proposed contaminants on a site may pose health risks and it might be wise to contain or remove hazardous material. However, present procedures are reactive and few Ministry attempts are made to evaluate and identify sites which should be cleaned-up but are not undergoing a change in use.

It would be beneficial if the Province would take a more direct and active role in identifying sites that are contaminated or at least provide funds for efforts by municipalities to do so. Once these sites are identified, the scale and funding required for clean-up efforts could be estimated. The Province should consider the creation of a dedicated pool of funds for clean-up in cases where no owner or previous owner can be found to pay for the required clean-up.

Regional Interest in the Issue

The Province is responsible for developing the regulatory framework through which government responds to these problems. However, because of the services they provide, the property they own, and the statutory authority municipalities exercise through the Municipal Act, Planning Act, Health Protection and Promotion Act, etc... municipal functions, policies and procedures should be reviewed in the light of contaminated site issues.

The problems created by contaminated sites often have an impact on matters (e.g. water supply, road excavations, land use designation, fuel storage facilities) in which the Region is directly involved. For example, the City of Calgary has set-up a task force to inventory, investigate the safety of, and recommend a management program for all the underground petroleum storage tanks that fall under the city's jurisdiction.

The issue will likely grow in importance in Hamilton-Wentworth as the extent of contamination is discovered. There has been increasing pressure in the real estate market to redevelop older industrial properties in Lower Hamilton into residential uses. Several industrial and railway properties have recently been redesignated for alternative uses or are the focus of redesignation applications. Also, road projects often require the excavation of material that is potentially contaminated.

Governments at all levels throughout Ontario have become involved in the clean-up of contaminated property. Extensive soil contamination can result in clean-up costs that exceed the market value of the site. In Niagara Falls, a property owner was able to have property taxes reduced to $1 as a result of the property being deemed virtually worthless in its contaminated condition.

One issue for municipalities with regard to the problem is that of ownership and liabilities related to ownership. Current owners of contaminated land, but also in certain cases past owners of contaminated land, are generally liable for the costs of cleaning-up contaminated property and all other affected properties that have been proven to be damaged by

contaminants. Municipal governments often purchase old industrial land to carry out road projects, downtown revitalization or the creation of green space and waterfront recreational areas. In Hamilton the former Lax property and new H.S.R. site are good examples of the complications and frustrations that can arise when a piece of property a local government has acquired turns out to be contaminated.

Boards of Health, are required by the mandatory programs under the Health Promotion and Protection Act to periodically prepare an environmental risk report that would include a list of contaminated sites. In Hamilton-Wentworth, the Regional Department of Public Health Services assumes the responsibility for carrying out the requirements of this Act.

Therefore the Region has an interest in this issue for a number of reasons;

Moral/Political: the general moral responsibility to protect citizens against harm from hazardous materials and meet public expectations;

Regulation of Land Use: the potential exercise of the power to refuse to rezone industrial properties to allow other uses unless it has been proven that the properties in question do not contain toxic materials;

Legal Obligations: the specific legal responsibility acquired by any owner that buys, sells or utilizes properties that are contaminated and;

Impact on Departmental Functions: engineering project planning or real estate transactions must now take into account the potential presence of contaminated soil.

Regional Role

The types of activities that the Region could become involved in to deal with the issue of contaminated sites can be divided into the following categories:

1) research and identification
2) policy and program development
3) procedures implementation
4) advocacy and education

Regional Council has directed the preparation of an implementation plan for a Regional Environmental Office (report HEA-90-081 approved on February 5, 1991 by Regional Council). The structure and function of the proposed Regional Environmental Office could incorporate all these types of activities.

One of the most important constraints for the Region in preparing policies, programs or procedures to deal with the issue of contaminated sites is the limited amount of research and identification of sites in the Region. No agency, department or ministry has consolidated information on potentially contaminated sites into a comprehensive inventory. The Ministry

of the Environment has no plans to independently initiate an inventory of potentially contaminated sites. The collection, management and use of information on contaminated sites by the Region would have a variety of potential benefits and possible difficulties.

Conclusion

The Ministry of Environment now generally takes action to resolve contaminated site problems only on a reactive basis. Some municipalities around the province are developing their own information systems and different procedures to deal with the issue. The Region should request the Ministry of Environment to take more direct and investigatory action on a province-wide basis.

The Region has an interest in the resolution of problems related to contaminated sites. The issue cuts across departmental lines. A coordinated program that sets out the objectives, method and products of an appropriate course of action for the Region should be prepared.

Research, development of policy and procedures, and education (e.g. requests for changes in MOE procedures, property-owner information efforts) may all be effective components of such a program. The development of a Regional contaminated sites program should be considered a high priority project during the preparation of the Implementation Plan for the Regional Environmental Office.

The following principles should guide Regional action:

1. Regional action should supplement or have the result of encouraging the exercise of Provincial responsibilities. It should not put the Region in the position of managing site clean-ups or carrying out other provincial functions.

2. Regional action should be coordinated on an interdepartmental basis preferably in the context of the proposed Regional Environmental Office.

3. Regional action should be sensitive to landowner concerns and reflect Freedom of Information legislation.

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CONTAMINATED SITES
in
HAMILTON-WENTWORTH

Discussion Paper
(Planning and Development Department)
May 1991

1. THE PROBLEM

A potential health threat is posed to the community from contaminated sites on which buildings are developed or from which contaminants can move off-site. Contamination of a site by hazardous materials can occur in a number of ways, including inadequate storage, spills or long-term deposition. Materials commonly associated with contaminated property include PCBs, heavy metals, radioactive materials, pesticides, leakage from petro-chemical storage tanks, chemical wastes, and a broad range of industrial byproducts.

When is a Site Considered Contaminated?

> A site is contaminated when materials that cause adverse or undesirable effects on humans are found in sufficient concentrations in the soil to pose a potential risk.

Every piece of land will contain at least tiny amounts of some potentially dangerous material, such as mercury or lead. Thus, the determination of whether or not a site can be considered contaminated depends both on the concentrations of harmful materials found at a site and on the level of risk associated with those concentrations.

Defining which lands are contaminated and which are not, and defining when a site found to be contaminated is in fact "cleaned-up", can therefore be the focus of much debate. Any examination of the issue of contaminated property will undoubtedly touch on the central question of what constitutes a dangerous level of contamination by some compound or mixture of compounds, and whether the limits of acceptable risk have been exceeded.

Now that sophisticated devices are increasingly capable of detecting small quantities of toxic materials in samples of water or air the potential for contamination of areas near to industrial activities is better understood. Many properties adjacent to original sources of contaminants have become contaminated. For instance, this may be a result of buried chemicals mixing with groundwater or airborne lead emissions from battery smelters. Companies, municipalities and individuals examining the potential purchase of a piece of real estate must now

evaluate whether toxic materials were at one time deposited on the individual property in question and also whether or not toxic materials have been or could be deposited on the property from adjacent areas.

Redevelopment of Contaminated Sites

The issue of contaminated sites is often associated with attempts to change the use of a property from industrial to other uses. Urban areas in Europe and Asia have historically seen numerous transitions of land-uses between different types of activities, as have older North American cities. Municipalities throughout North America were accustomed to routinely rezoning lands from industrial to other uses because of a lack of understanding of the possible effects of deposits of hazardous materials on building occupants above these deposits.

The consequences of these actions can be unfortunate. Recent experience with transitions from previous industrial sites to residential or institutional developments has proven this to be the case. Residues left behind by industrial activities can threaten the health of individuals unlucky enough to purchase homes on or adjacent to old industrial areas or old waste sites.

The Cause and Extent of the Problem

The full extent of the contaminated site problem is unknown. In Canada, it has been estimated that there are at least 30,000 industrial sites that are potentially contaminated with toxic materials. All land that has been utilized for industrial activities related to the production of chemicals, petroleum products, steel, iron and other metals and metal goods, electronics, and plastics, or for the storage or disposal of industrial byproducts and wastes has some level of contamination.

Furthermore, many other types of activities may cause contamination on a site, either as a result of ongoing activities or as a result of activities that took place years or decades before. Transportation and utility uses have been identified as uses associated with contamination. Certain commercial activities such as dry-cleaning and printing have also been associated with the contamination of land with dangerous or toxic materials. Agricultural lands can become contaminated due to the improper use of chemicals in the farming process or due to 'back 40' dumps where containers of pesticides and/or other hazardous materials have been disposed of improperly or illegally. Underground metal storage tanks have rusted and leaked causing extensive groundwater contamination.

The precise extent of the problem in Hamilton-Wentworth is unknown but the issue will likely continue to grow in importance. One major factor contributing to this growing awareness is the increasing pressure felt in real estate markets to redevelop older industrial properties in Lower Hamilton into residential uses. Several industrial and railway properties have recently been redesignated for alternative uses or are the focus of redesignation applications. Also, road projects often require the excavation of material that is potentially contaminated.

Public concern over environmental exposure to toxic substances is high. As the public becomes more aware of groundwater contamination issues, as the scientific community increases its ability to analyze the effects of various industrial compounds on human beings and its capacity to detect these compounds on any given site, pressure will probably grow for governments in Ontario to take visible and effective action.

Costs of Clean-up

Governments at all levels throughout Ontario have become involved in the clean-up of contaminated property. The clean-up of toxic sites has proven to be an expensive undertaking. Clean-up costs can range from tens of thousands to millions of dollars depending on the degree and/or nature of the contamination. Costs can rise even further if groundwater contamination has occurred.

For example, in Smithville, the provincial government has begun a $24 million clean-up in order to protect groundwater from contamination from a PCB storage facility. The Regional Municipality of Ottawa-Carleton must pay an estimated $12 million for clean-up costs of a coal tar site accidentally uncovered during the construction of an underpass. Further compounding Ottawa-Carleton's problems is MOE legal action against the municipality. The MOE is of the opinion that the clean-up was done improperly and alleges that the procedures employed during the clean-up process failed to contain all of the contaminants and that the Ottawa River was subsequently polluted. The Toronto Harbour Commission plans to decontaminate, on site, soil from a 490 hectare port industrial district at an estimated cost of $320 million.

In some cases, severe soil contamination can result in clean-up costs that exceed the current market value of the site, leaving the property virtually worthless. In Niagara Falls, a property owner was able to have property taxes reduced to $1 as a result of the property being deemed virtually worthless in its contaminated condition.

2. JURISDICTION, AUTHORITY AND RESPONSIBILITY

Under the Constitution, primary responsibility for this matter lies with provincial governments. The Canadian Government has provided financial support to provinces for clean-up efforts, has acted in an advisory capacity and has assisted in research through the various divisions of Environment Canada. Agreements have been made between the provinces and the federal government over who should pay for which contaminated sites.

However, no federal legislation duplicates the role of the United States' 1976 Resources Conservation and Recovery Act and the 1980 Comprehensive

Environmental Response, Compensation, and Liability Act. Under the powers granted under these laws, the American Environmental Protection Agency is responsible for regulating the disposal, storage, and in cases deemed necessary, the clean-up of toxic wastes. In the U.S. where a party cannot be found legally responsible for the clean-up costs a substantial amount of federal money is available from a "superfund" to pay for what needs to be done. No such dedicated pool of funds is available in Canada.

In some provincial and state jurisdictions municipalities have a defined role to play in resolving contaminated site issues. In Canada, the most extensive approach to dealing with the problem has developed in Quebec. The Quebec government has directed that all municipalities must withhold building permits in those cases where contamination may be a problem and where residential, recreational or commercial land-uses are proposed. The Quebec Ministry of the Environment has backed up the directive by circulating a list of over 10,000 sites that may be contaminated to local governments, urban planners, developers, and real estate lawyers. Under the new directive developers are responsible for cleaning up any toxic residue left behind by past land-uses, and property owners are often required to send soil samples to the Ministry of the Environment before construction is allowed to take place.

New Jersey has been the most bold proponent of state-level regulations dealing with the contaminated site issue in the United States. New Jersey's Environmental Cleanup and Responsibility Act requires that every time an industrial facility is closed down a certificate is required to show that the property has been cleaned up to the state's specifications. Before any industrial land is sold or redeveloped a clean bill of health is required from the state's environmental protection agency. Connecticut, New Hampshire, California and Rhode Island, have adopted legislation that regulates the transfer or rezoning of land from industrial or waste storage uses to recreational and residential uses. As awareness of the problem grows throughout North America, regulations of this sort will increasingly be enacted at the state and provincial level.

Ontario

In Ontario responsibility for the regulation of contaminated sites is generally assumed by the Ministry of the Environment (MOE), although the Ministry of Municipal Affairs and the Ministry of Consumer and Corporate Affairs also have a hand in the matter.

The MOE has a number of powers and responsibilities under the Environmental Protection Act R.S.O. 1980, Chpt. 141, as amended, and the Environmental Assessment Act R.S.O. 1980, Chpt. 140, as amended. Following from this statutory authority guidelines for the decommissioning and clean-up of industrial and land-fill sites have been prepared. More generally, the MOE licenses waste generators and haulers, collects data on certain types of existing and abandoned industrial sites, monitors water quality, and is responsible for granting certificates

of approval for landfill operations and industrial processes that emit substances into the atmosphere or watercourses.

The Ministry of Consumer and Corporate Affairs, Fuel Safety Branch, is responsible for the licensing and regulation of underground fuel storage tanks. Under the mandatory programs of the Province's Health Protection and Promotion Act, Boards of Health are required to periodically produce Environmental Risk Area reports.

Because of its jurisdiction over all municipal governments within the province the Ministry of Municipal Affairs may have a role to play. Although the Ministry of Municipal Affairs has to date issued no explicit directives regarding municipal involvement in clean-up efforts or regulatory approaches to the toxic real estate problem, it is conceivable that some new directives will be forthcoming, particularly because of precedents in this area in other provinces and American states in recent years.

Provincial Guidelines and Clean-up

In Ontario, there is no comprehensive, absolute standard for allowable levels of contaminants in soil. A process for establishing allowable concentrations for materials in soil is set out in the Ministry of the Environment's Site Decommissioning Guidelines.

The Guidelines are applied in circumstances where a landowner wishes to shut down an industrial plant or change the use of associated land. Estimates or test results of actual contaminant concentrations are provided to the Ministry of Environment (MOE) based on an assessment of the site by the company or landowner sponsoring the decommissioning. These levels are then reviewed by the MOE to determine the level of clean-up required. If necessary the MOE can require that a remedial action plan be carried out by the landowner to its satisfaction. These guidelines are also applied to the clean-up required for old contaminated sites such as coal gasification sites.

3. INADEQUACY OF PRESENT SITUATION

Reactive Management by MOE

The Site Decommissioning Guidelines the Province applies to the shutting-down of industrial and utility facilities are insufficient to ensure that all potentially contaminated property is not redeveloped before all contaminated materials are identified and, when necessary, removed. The Province does not have a strict administrative system in which all property-owners must obtain a permit before converting industrial land to other uses, as is the case in New Jersey.

The MOE will react to information supplied by the Ministry of Labour about a plant closing, react on a complaint basis or respond to landowner inquiries. However, by and large, the Ministry of the Environment depends on its role in the development approval process as a means of identifying old industrial sites that should be examined for contaminants. Customarily the MOE is circulated rezoning or official plan amendment applications by the Regional or Area Municipality Planning Departments.

As part of the development approval process the MOE waits until one of its officers is circulated a development proposal for comment before recommending whether a site should be examined for potential contaminants. Thus, the MOE is often asked to comment on a development proposal even though it has no record of the previous uses of the site with which to cross-reference the application.

At the local level, applications for building permits on properties where the previous use was non-conforming industrial do not commonly require Planning Department attention. In such cases a new use, for instance residential, may conform with the zoning bylaw and official plan and therefore not require circulation. As a result not all redevelopment comes to the attention of the MOE.

Moreover, building permit application lists are not commonly reviewed by the MOE. New industrial buildings on potentially contaminated industrial properties may require extensive excavations posing threats to construction workers or resulting in excess fill which has to be removed from the site.

Since the present procedures are reactive few Ministry attempts are made to identify sites which require clean-up by the present owner. Even when no redevelopment or change of use is proposed contaminants on a site can pose health risks to workers and should be cleaned up. Also, contaminants can be moved off-site by wind, run-off, and mixing, floating or sinking in the groundwater and have impacts on the environment beyond property boundaries.

Lack of Information

The Ministry of Environment has no explicit legislative mandate to compile lists of potentially contaminated sites in the Province, nor is it required to issue a clean bill of health for every property that is being redeveloped from an industrial or utility-use to other uses.

No agency, department or ministry has consolidated information on potentially contaminated sites into a comprehensive inventory in the Region. The Ministry of the Environment does not intend to take on the responsibility of assembling an inventory of potentially contaminated sites. Local representatives of MOE have stated the Ministry will limit its activities to essentially reactive actions undertaken only when a property comes to their attention due to other initiatives.

However, the Ministry of the Environment wishes other government bodies to take on some of the responsibility for uncovering contaminated sites before they are redeveloped for other uses. In fact, the Ministry has proposed that Area Municipalities require developers to produce evidence that a site previously used for industrial, utility or transportation-related activities is not contaminated.

Many different types of data are available on contaminated sites. Short of testing the soil and groundwater of every property in the Region, the most expedient means of identifying potentially contaminated sites is through historical record search. The types of materials that can be used for historical searches are: aerial photos, business directories, insurance records, municipal assessment records, and building permits.

Other more recent records that can lead to the discovery of possible soil and groundwater contamination are: Fuel Safety Branch records on buried fuel tanks; MOE certificates of approval for industries and landfill sites; current assessment data; Workplace Hazardous Materials Information System (WHMIS) records; sewer use; and Municipal Industrial Strategy for Abatement (MISA) testing data.

In any event, soil testing to confirm the presence of contamination is most efficiently undertaken following a historical search for evidence of specific industrial or other pollution. Information collected through historical searches can reduce testing costs considerably by identifying probable areas of contamination. Soil and groundwater testing on a property-wide basis is an expensive proposition, and requires previous knowledge about both the types of contaminants to be tested for (especially if the contaminants are uncommon) and the probable location of the source of contaminants. Random testing by boring holes and then testing for unspecified contaminants in many locations on a large site can be prohibitively expensive.

New technologies, such as seismic and electromagnetic testing, hold out a promise for economical means of identifying potential sources of contamination such as old barrels, tanks, reservoirs and concentrations of heavy metals or chemicals. Bio-technical immunoassay (the use of micro-organisms in tests to identify specific chemical compounds) may also soon allow efficient, reliable and economical testing of surface soils in the field.

Municipal Precedents For Collection of Data on Contaminated Sites

Municipal attempts to collect comprehensive data on contaminated sites are still relatively rare in Ontario. The City of Niagara Falls has collected a great deal of information on potential sources of pollution and contaminated sites as part of a larger geographic information system. The City of Toronto has made a thorough attempt to determine the extent of the problem of contaminated sites in that city. In both the cases of Toronto and Niagara Falls, the information being collected is still not complete, and substantial resources have been expended in attempts to

collect the required information. (See Appendix for a discussion of information collection on potentially contaminated sites by the Region.)

There is no statutory requirement that the Region identify properties that;

1) may contain dangerous or toxic materials
2) may be spreading dangerous or toxic materials.

There is no statutory requirement that all applications for redevelopment must be investigated by the Planning Department to ensure that the site is devoid of contaminants. However, the most important constraint for the municipality in preparing policies, programs or procedures to deal with the issue of contaminated sites is the limited amount of research and identification of sites that has taken place in the Region.

4. MUNICIPAL INVOLVEMENT

In the final analysis the Province is ultimately accountable for developing the regulatory framework through which government responds to these problems. However, because of the services they provide and the statutory authority municipalities exercise through the Municipal Act, Planning Act, Health Protection and Promotion Act, etc... municipal functions, policies and procedures should be reviewed in the light of contaminated site issues.

The problems created by contaminated sites often have an impact on matters (e.g. water supply, road excavations, land use designation) for which the Region is clearly responsible. Furthermore, both moral arguments and public expectations suggest municipalities have a role to play in resolving the problems associated with contaminated sites.

One of the most pressing issues for municipalities with regard to the problem is that of ownership and liabilities related to ownership. Provincial legislation and common law precedent make current owners of contaminated land, but also in certain cases past owners of contaminated land, liable for the costs of cleaning-up contaminated property and all other affected properties that have been proven to be damaged by contaminants.

Municipal governments have, and will probably continue to purchase old industrial land as part of economic development schemes, downtown revitalization attempts or the creation of green space and waterfront recreational areas. Municipal governments also gain title to land due to tax default. Thus, the liability issue poses serious questions about most local governments' abilities to finance clean-ups for any sites these municipalities have been unfortunate enough to purchase. In Hamilton the former Lax property is a good example of the complications and frustrations that can arise when a piece of property a local government has acquired turns out to be badly contaminated.

Boards of Health, are required by the mandatory programs under the Health Promotion and Protection Act to periodically prepare an environmental risk report that would presumably include a list of contaminated sites. In Hamilton-Wentworth, the Regional Department of Public Health Services assumes the responsibility for carrying out the requirements of this Act.

Other municipalities in Ontario are examining ways to use their authority to prevent redevelopment of contaminated sites. It may soon be more common procedure in Ontario for regional and local municipalities to demand consultant or MOE reports from developers that certify that industrial land being converted to other uses is devoid of contaminated materials. The City of Ottawa has proposed a municipal environmental assessment program to create such a procedure. The City of Toronto has an environmental protection office which reviews development proposals. However, there does not appear to be any consensus on the most appropriate type of action, or a common single approach, being taken by municipalities across the Province.

Moral Arguments and Public Expectations

Municipal government has a moral responsibility to take reasonable steps to ensure that its citizens' lives are not jeopardized by dangerous or toxic materials. Municipal health, engineering and planning departments share a common moral responsibility to take measures within their capacity to help ensure that harmful contaminants are detected and safely contained or eliminated.

The tire fires in Ontario and Quebec, the groundwater contamination crisis in Elmira, and the radioactive soil problem in Scarborough are all recent examples of the public turning to local municipal governments as well as to provincial ministries for answers to their predicaments. Local and regional governments must face up to these expectations that a part of the responsibility for dealing with contaminated sites and associated problems rests with municipal governments.

Regional Interest

There are four general reasons for Regional interest in this matter;

1) Moral/Political: the general moral responsibility to protect citizens against harm from hazardous materials and meet public expectations;

2) Regulation of Land Use: the potential exercise of the power to refuse to allow rezoning of industrial properties to allow other uses unless it has been proven that the properties in question do not contain toxic materials in order to avoid liability;

3) Legal Obligations: the specific legal responsibilities acquired by any owner that buys, sells or utilize properties that are contaminated and;

4) Impact on Departmental Functions: engineering project planning or real estate transactions must now take into account the potential presence of contaminated soil.

The types of activities that the Region could become involved in to deal with the issue of contaminated sites can be divided into the following categories:

1) **Research and Identification**; (i.e the preparation of lists of known contaminated sites or searches through historical records for the purpose of preparing an inventory of potentially contaminated sites.)

2) **Policy and Program Development**; (i.e. the development and implementation of Official Plan policies or of a program to monitor underground storage tanks owned by the Region.)

3) **Procedures Implementation**; (i.e. the routine steps through which policy is applied, such as the cross-checking of all new development applications against a list of known locations of dangerous materials or implementation of a leachate monitoring program at old landfill sites.)

4) **Advocacy and Education** (i.e. the lobbying of the Ministry of the Environment to undertake more extensive research of potential locations of contaminated materials, fund such efforts or develop legislation and regulation to attack the problem on a province-wide basis.)

A Region-wide approach to contaminated sites issues must be coordinated among the affected departments. In Hamilton-Wentworth the Engineering, Planning and Public Health Services Departments have recognized the issue and are cooperating to examine the various ways in which information on contaminated sites and related issues could be collected and utilized most effectively. The Terms of Reference for a Regional Environmental Office have been approved in principle by Council. An implementation plan for establishing the Office is currently being prepared which could include this issue as part of its mandated activities.

5. CONCLUSION

Initial analysis suggests that the Province should take a more proactive role in identifying sites that are potentially contaminated or as a minimum provide funds

for efforts by municipalities to do so. Provincial legislation should be enacted explicitly requiring MOE approval for developments on potentially contaminated property prior to issuance of a building permit. Such a Province-wide permit system would ensure that property owners faced a more or less uniform development approval process, facing similar restrictions on the redevelopment of property in any municipality. The Province should seriously consider the creation of a dedicated pool of funds for clean-up in cases where no owner or previous owner can be found to pay for required clean-up.

There is a sufficient evidence of Regional interest in the issue of contaminated sites and of public concern over contaminants in the environment that the Region should undertake a comprehensive evaluation of the procedures, policies and departmental functions that are affected by the contamination of soil.

Following from this evaluation the Region should develop a contaminated sites program that combines possible actions into a coordinated strategy. Such actions may include; lobbying the Province for changes in legislation, the identification of potentially contaminated sites, changes in development approval processes or departmental procedures, the notification of the MOE or property-owner information efforts.

Effective Regional action may be made possible by consolidating information on contaminated sites. However, any Regional "inventory" or other such action should be organized by the following principles:

1. Regional action should supplement or have the result of encouraging the exercise of Provincial responsibilities. It should not put the Region in the position carrying out provincial functions such as managing site clean-ups or taking on roles and responsibilities solely because of the absence of needed Provincial legislation.

2. Regional action should be coordinated on an interdepartmental basis preferably in the proposed Regional Environmental Office.

3. Regional action should reflect Freedom of Information legislation and be sensitive to landowner concerns.

The Terms of Reference for the Regional Environmental Office approved by Council (Report HEA 90-081) incorporates the necessary interdepartmental co-ordination for the development of a program to co-ordinate Regional activity vis a vis contaminated property issues. Such a program should therefore be considered a high priority during the preparation of the implementation plan for the Office. Should the Office implementation plan fail to gain the approval of Council some other mechanism for interdepartmental coordination will have to be created to deal adequately with this issue.

APPENDIX

POTENTIAL USE AND MANAGEMENT OF INFORMATION ON CONTAMINATED SITES

The collection of information on potentially contaminated sites could serve two general purposes:

1) Information of this type could be utilized to identify properties that require some sort of examination or submission of materials before receiving development approval. This is to say, for example, that the Region could require that all redevelopment (subdivision or redesignation) proposals for properties that were included on their special listing be supplemented with a historical background of the properties in question. In this type of situation, the information used would serve as the basis for a selective application of policy.

2) Information of this type could be used to identify properties in a proactive manner. The Region could help to identify sites where potential contamination was of particular concern (e.g. might affect the quality of groundwater). The MOE could then be requested to apply their regulatory authority to ensure a satisfactory level of clean-up.

Potential Beneficial Effects of the Region Collecting Information

There are a number of benefits that could result from the collection of data on contaminated sites. The Planning Department and Area Municipalities would have an increased capacity to prevent the redevelopment of contaminated property to residential or institutional uses. A stricter contaminated site redevelopment policy and a comprehensive information base on potentially contaminated sites would help ensure that human exposure to toxic materials is minimized.

Better information on contaminated sites may decrease project planning costs. Consultants are hired by the Region for Environmental Assessments for road projects. These incorporate evaluations of impacts but often information on the presence or absence of contaminated soil is unknown. Better information should decrease the cost of Assessments over the long term.

The information collected would serve as the basis for the provincially required "Environmental Risk Areas" report.

Information collected by the Region on contaminated sites would be available to educate landowners, businesses and local residents of potential problems. Industrial enterprises and landowners who know their property is potentially contaminated may be able to prevent costly future contamination and act before the problem is compounded by the spread of the contamination or discovery of the

problem once redevelopment has commenced. Clean-up costs are rising quickly. Regional information on historical uses (i.e. potential contamination) would presumably reduce the workload of consultants and therefore the costs to *landowners. Also, since* the landowner is ultimately responsible for clean-up, which may involve law suits against previous owners, knowledge of contamination may help present landowners recover clean-up costs.

Storage and Retrieval of Data

Information can be stored, organized and interpreted in alternative ways. If appropriate action is to follow, some form of interpretation of the data will be necessary. This implies that some method of placing priority on information that is gathered. Certain types of contaminants will be of more interest in the database than others. Relationships between types of hydrological or topographical attributes of properties may have to be taken account of. Canadian computer software to perform this kind of analysis is being developed, (e.g. AERIS).

Information can be extensive and stored in a sophisticated GIS, such as PARCIL, or can take the form of paper files for only priority sites that are under examination because of inquiries related to redevelopment proposals. Yet another type of information could be computerized records of industrial properties kept on file so that new proposals for redevelopment can be cross-checked against lists of previous (but relatively recent) industrial sites.

Potential Problems with Regional Information Collection

Information collected as part of an attempt to identify contaminated sites or groundwater pollution sources, whether as part of a proactive research effort or as part of a reactive development approval "check-off" list, must be made available to the public as a result of access to information legislation. A disclaimer would have to accompany any release of information stating the limits of the data; that it is simply an estimation of possible sites where contamination of one sort or another may have occurred.

It is possible that a negative reaction could develop in the real estate or business community to the collection of data by the Region on potentially-contaminated sites. Experience in Niagara Falls points, however, to the opposite sort of situation where the business and real estate communities were generally positive in their reactions to the creation of a database including potential sources of contamination. Industrial firms must be made aware at the outset of any attempt to identify problem areas, be given the opportunity to participate in the process and kept current on the use of the information. It would be wise to facilitate communication between the Region and industries through existing groups such as the Community Awareness Emergency Response group (CAER).

Another difficulty involved with a database of information on potentially-contaminated sites could be that a large number of properties would be identified in Hamilton as potential problem sites. This could have an unpredictable effect on short-term or relative property values and resulting assessment revenues for identified properties. This issue should become less important over time since real estate appraisers, lawyers and sales people acting for purchasers are now more aware of the precautions they must take to protect the interest of their clients. Therefore, potential contamination will be increasingly factored into the appraised value and resale price of industrial land.

The Need for Co-ordination Between Departments

If a database is to be developed many departments and agencies must be involved in the prioritizing and interpretation of various types of information. For instance, the Health department has some expertise to determine the type of materials, (and the historical processes and economic activities that may have used these compounds) that pose the most danger. The Engineering Department has the expertise to determine what sort of physical factors are involved in the potential spread of contaminants in the groundwater or surface soils.